

Serial No. 10/713,271  
Amendment dated February 3, 2005  
Reply to Office Action of October 5, 2004

Docket No. K-0550

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A microwave oven, comprising:
  - an outer case forming a top and sides of a cabinet;
  - a base plate forming a bottom of the cabinet;
  - a front panel and a rear panel mounted in a front part and a rear part of the base plate for forming a front surface and a rear surface, respectively;
  - an inner case forming a cooking chamber on the base plate;
  - first and second transformers mounted at corners of one side of the base plate;
  - a fan positioned above the second transformer for drawing external air into the inner case via the first and second transformers;
  - a fan motor connected to the fan for providing a driving power to the fan;
  - a fan housing for protecting the fan;
  - an air duct positioned at least partially between the first and second transformers so that the air duct is at least partially interposed between the transformers, the air duct having one end in communication with the fan housing and the other end branched to form first and

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second branch ducts; and

first and second magnetrons positioned on an outside surface of the inner case, wherein the first and second magnetrons are connected to the first and second branch ducts, respectively.

2. (Original) The microwave oven as claimed in claim 1, wherein the base plate includes a front part having a plurality of inflow holes.

3. (Previously Presented) The microwave oven as claimed in claim 1, wherein the inner case comprises:

a plurality of inlet holes for introduction of air passed through the first and second branch ducts and the first and second magnetrons into the inner case; and  
a plurality of outlet holes for discharging the air introduced into the inner case.

4. (Original) The microwave oven as claimed in claim 3, wherein the outlet holes are connected to a plurality of discharging ducts for guiding flow of air discharged from the inner case.

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5. (Currently Amended) The microwave oven as claimed in claim 4, wherein the rear panel has a plurality of first outlet holes connected to the discharging ducts for ~~charging~~ discharging air to outside of the cabinet.

6. (Original) The microwave oven as claimed in claim 2, wherein the base plate is provided with a guide for uniform supply of external air introduced thereto through the inflow holes to the first and second transformers.

7. (Previously Presented) The microwave oven as claimed in claim 6, wherein the guide is in the form of a square bar having one end positioned between the inflow holes and the other end positioned between the first and second transformers.

8. (Previously Presented) The microwave oven as claimed in claim 1, wherein the rear panel has at least one second outflow hole for discharging the air passed through the second transformer.

9. (Previously Presented) The microwave oven as claimed in claim 1, wherein the air duct is mounted so as to be spaced a distance apart from an inside wall of the outer case.

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10. (Previously Presented) The microwave oven as claimed in claim 9, wherein the first and second branch ducts of the air duct include sloped duct walls, respectively, such that each branch duct becomes narrower as the respective branch duct gets closer to the respective first or second magnetron.

11. (Original) The microwave oven as claimed in claim 10, wherein the first branch duct is connected to a first duct for guiding air flow toward the fan motor, and the first magnetron is connected to the first duct.

12. (Previously Presented) The microwave oven as claimed in claim 10, wherein the rear panel has a second outflow hole for discharging the air cooled by the fan motor through the first duct to an outside of the cabinet.

13. (Previously Presented) The microwave oven as claimed in claim 1, wherein the air duct includes a split guide between the first and second branch ducts for guiding the air introduced thereinto by the fan.

14. (Original) The microwave oven as claimed in claim 13, wherein the split guide is formed by bending an inside wall of the air duct.

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15. (Previously Presented) The microwave oven as claimed in claim 10, wherein the first branch duct is connected to a second duct for guiding the flow of air to the rear panel, and the first magnetron is mounted in the second duct.

16. (Previously Presented) The microwave oven as claimed in claim 15, wherein the rear panel includes a second outflow hole connected to the second duct for discharging the air introduced thereto to outside of the cabinet.

17. (Original) The microwave oven as claimed in claim 16, wherein the second duct includes a first communication hole formed therein for supplying air for cooling the fan motor.

18. (Previously Presented) The microwave oven as claimed in claim 10, wherein the second branch duct is connected to a third duct for guiding the flow of air to the rear panel, and the second magnetron is in the third duct.

19. (Previously Presented) The microwave oven as claimed in claim 18, wherein the rear panel includes a third outflow hole for discharging the air introduced thereto to outside of the cabinet.

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20. (Original) The microwave oven as claimed in claim 19, wherein the third duct includes a second communication hole for guiding air flow to the fan motor.

21. (Currently Amended) A microwave oven, comprising:  
an outer case forming a top and sides of a cabinet;  
a base plate forming a bottom of the cabinet;  
an inner case forming a cooking chamber disposed within the outer case;  
first and second transformers positioned on the base plate;  
a fan apparatus positioned adjacent one of the first and second transformers and configured to draw external air into the inner case via the first and second transformers;  
an air duct positioned at least partially between the first and second transformers so that the air duct is at least partially interposed between the transformers, the air duct having one end in communication with the fan housing apparatus and the other end branched to form first and second branch ducts; and  
at least one magnetron positioned outside the inner case, wherein the at least one magnetron is connected to the air duct.

22. (Previously Presented) The microwave oven as claimed in claim 21, further comprising:

a front panel and a rear panel mounted in a front part and a rear part of the base plate for forming a front surface and a rear surface, respectively.

23. (Previously Presented) The microwave oven as claimed in claim 21, wherein the fan apparatus comprises:

a fan;  
a fan motor connected to the fan and configured to provide a driving power to the fan; and  
a fan housing configured to protect the fan.

24. (Currently Amended) The microwave oven as claimed in claim 21, wherein the at least one magnetron comprises first and second magnetrons and wherein the first and second magnetrons are connected to the first and second branch ducts, respectively, of the air duct.

25. (Previously Presented) The microwave oven as claimed in claim 24, wherein the inner case comprises:

a plurality of inlet holes configured to introduce into the inner case air that has passed through the first and second branch ducts and the first and second magnetrons; and  
a plurality of outlet holes configured to discharge the air from the inner case.

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26. (Previously Presented) The microwave oven as claimed in claim 25, wherein the outlet holes are connected to a plurality of discharging ducts configured to guide the air discharged from the inner case.

27. (Currently Amended) The microwave oven as claimed in claim 25, wherein the rear panel has a plurality of first outlet holes connected to the discharging ducts and configured to discharge the air to outside of the cabinet.

28. (Previously Presented) The microwave oven as claimed in claim 21, wherein the base plate includes a plurality of inflow holes and a guide is provided on the base plate which is configured to guide external air introduced through the inflow holes to the first and second transformers.

29. (Previously Presented) The microwave oven as claimed in claim 28, wherein the guide comprises a square bar having one end positioned between the inflow holes and the other end positioned between the first and second transformers.

30. (Previously Presented) The microwave oven as claimed in claim 21, wherein the first and second branch ducts of the air duct include sloped duct walls, respectively, such that

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each branch duct becomes narrower as the respective branch duct gets closer to the respective first or second magnetron.

31. (Previously Presented) The microwave oven as claimed in claim 21, wherein the air duct includes a split guide between the first and second branch ducts configured to guide air introduced thereinto by the fan.